UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

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OSWER Directive 9355.0-28

MEMORANDUM

SUBJECT: Control of Air Emissions From Superfund Air Strippers at Superfund Groundwater Sites

FROM: Henry L. Longest II, Director
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TO: Addressees

PURPOSE

This memorandum establishes guidance on the control of air emissions from air strippers used at Superfund sites for groundwater treatment and establishes procedures for implementation. Under this guidance, Regions should continue to make air emission control decisions on a case-by-case basis using the nine remedy selection criteria and the remedy selection process set forth in the proposed National Contingency Plan (NCP). As described below, however, the evaluation and weighing of the criteria in a "to be considered" (TBC) context will differ according to the air quality status of the site's location.

BACKGROUND

Approximately 35% of the Records of Decision (RODs) signed to date have involved sites which use a pump and treat technique to either partially or fully remediate groundwater contamination. Close to 45% of these pump and treat sites have selected air stripping. For the foreseeable future, OERR expects to use air stripping at about the same rate. This treatment technique relies on volatilization to remove volatile organic compounds (VOCs) from the groundwater, i.e. it transfers the contaminants from the liquid to vapor phase. One known side effect of air stripping is the emission of VOCs, many of which

STATEMENT OF POLICY

For sites located in areas that are attaining the National Ambient Air Quality Standards for ozone, Regions should continue applying controls based on existing Agency policy. In most cases, this will mean the adoption of controls largely in response to State ARARs, risk management (i.e., protectiveness) guidelines, and other requirements of CERCLA Section 121.

In ozone nonattainment areas, however, the adoption of controls is more likely to be indicated even if they are not mandated by current Federal or State laws and regulations or indicated by a cancer risk analysis. Aside from cancer risk from air toxics, VOC emissions contribute to non-cancer health risks in nonattainment areas because most are precursors to the formation of ozone. Consideration of these non-cancer risks when applying the remedy selection criteria generally will show that in nonattainment areas Superfund air strippers, except those with the lowest emissions rates as indicated below, generally merit controls. In determining the need for air stripper controls at a particular Superfund site in a nonattainment area, the Regions should be guided by the emissions limit goals in the document entitled, "Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations," issued in May 1988 by the Office of Air Quality Planning and Standards (OAQPS) to aid States in revising their State Implementation Plans (SIPs) to incorporate post-1987 ozone attainment strategies. The OAQPS guidance indicates that the sources most in need of controls are those with an actual emissions rate in excess of 3 pounds per hour (lb/hr) or 15 lb/day or a potential (i.e., calculated) rate of 10 tons per year (TPY) of total VOCs. The calculated rate assumes 24-hour operation, 365 days per year. Regions should note that control levels are applied on a facility basis. For the purposes of this guidance, facility is defined as a contiguous piece of property under common ownership.

This guidance applies to air strippers at Superfund sites. In establishing the policy, however, the potential for applicability to other VOC sources is recognized. Generally, the guidelines described for air strippers are suitable for VOC air emissions from other vented extraction techniques (e.g., soil vapor extraction) but not from area sources (e.g., soil excavation).

This guidance applies to future remedial decisions at Superfund sites. The policy is not explicitly designed for

The RI/FS scoping phase and work plan development should describe the specific data to be generated and the methods for doing so. Remedial Project Managers should consult with the designated Air Superfund Coordinator for technical assistance. Additional assistance is available from National Technical Guidance Manuals developed jointly by the Air and Superfund program offices for estimating air emissions and conducting air pathway analyses. The ROD should summarize this information as appropriate and clearly document the basis for the air emissions control decision.

Addressees:
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